

CLAIMS

What is claimed is:

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1. A data transmission system comprising:
a two-way communication link comprising at least one satellite;
at least one user terminal having two-way communication with the two-way communication link; and
5 at least one gateway having access to data and having two-way communication with the two-way communication link.
2. The system recited in Claim 1 wherein the two-way communication link comprises a low bandwidth two-way communication link.
3. The system recited in Claim 2 wherein the low bandwidth two-way communication link comprises a Ka-band communication link.
4. The system recited in Claim 1 wherein the two-way communication link comprises a low bandwidth request link and a high bandwidth data broadcast link.
5. The system recited in Claim 4 wherein the low bandwidth request link comprises a Ka-band communication link.
6. The system recited in Claim 5 wherein the Ka-band communication link provides a plurality of spot beams that cover selected coverage regions.
7. The system recited in Claim 4 wherein the high bandwidth broadcast link comprises a Ku-band communication link.
8. The system recited in Claim 7 wherein the Ku-band communication link broadcasts a wide area coverage beam to allows the requested information to be received by multiple user terminals.
9. The system recited in Claim 1 wherein the at least one user terminal comprises a cache.

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10. The system recited in Claim 1 wherein the at least one gateway comprises a cache.

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11. A method of communication data comprising the steps of:
providing one or more orbiting satellites that comprise a two-way communication link;
providing at least one user terminal having two-way communication with the two-way communication link;
providing at least one gateway having access to data and having two-way communication with the two-way communication link;
generating requests for data at the at least one user terminal;
transmitting the requests for data from the at least one user terminal by way of the two-way communication link to the at least one gateway;
obtaining the requested data at the at least one gateway; and
transmitting the requested data from the at least one gateway to the at least one user terminal by way of the two-way communication link.

10 12. The method recited in Claim 11 wherein the step of transmitting the requests for data comprises transmitting the requests for data by way of a low bandwidth communication link.

13. The method recited in Claim 12 wherein the low bandwidth communication link comprises a low bandwidth satellite communication link.

14. The method recited in Claim 12 wherein the low bandwidth communication link comprises a low bandwidth terrestrial communication link.

15. The method recited in Claim 12 wherein the low bandwidth communication link comprises a low bandwidth wireless communication link.

16. The method recited in Claim 11 wherein the step of transmitting the requested data comprises transmitting the data by way of a low bandwidth communication link.

17. The method recited in Claim 11 wherein the step of transmitting the requested data comprises transmitting the data by way of a high bandwidth data broadcast link.

18. The method recited in Claim 11 further comprising the step of caching the transmitted data at the at least one user terminal.

19. The method recited in Claim 11 wherein the step of obtaining the requested data at the at least one gateway comprises using a user's request history to obtain the requested information.

20. The method recited in Claim 11 wherein the step of obtaining the requested data at the at least one gateway comprises using a user's user profile to obtain the requested information.

21. The method recited in Claim 11 further comprising the steps of:
obtaining the requested data along with data related to the requested data at the at the at least one gateway; and
transmitting the requested and related data from the at least one gateway to the at
least one user terminal by way of the two-way communication link.

5 22. The method recited in Claim 17 further comprising the steps of:
storing the requested information at the at least one gateway; and
storing the related information at the at least one gateway.

23. The method recited in Claim 17 further comprising the step of broadcasting the requested information at predetermined intervals to simulate real-time information broadcasts.

24. The method recited in Claim 23 wherein the requested information that is broadcast comprises a predetermined number of most-requested web pages.

25. A data transmission system comprising:
a terrestrial communication link for communicating requests for data;
a satellite broadcast link for transmitting the requested data;
at least one gateway having access to data that communicates with the terrestrial communication link and the satellite broadcast link; and
at least one user terminal that communicates with the terrestrial communication link and the satellite broadcast link and that comprises a cache for caching the requested data broadcast by the satellite broadcast link.

26. The system recited in Claim 25 wherein the at least one user terminal comprises a cache.

27. The system recited in Claim 25 wherein the at least one gateway comprises a cache.

28. The system recited in Claim 25 further comprising a terrestrial communication link for transmitting the requested data to the at least one user terminal in the event that the satellite broadcast link becomes inoperative.

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